

WHAT IS CLAIMED IS:

1. A composite structure, which has a photocatalytic function and can be used for deodorization and wastewater treatment, comprising a foamed or porous substrate having apparent specific gravity of 0.9 to 0.01 and finely divided titanium oxide particles which are adhered onto the surface of the foamed or porous substrate.

2. The composite structure according to claim 1, wherein said composite structure is capable of floating on water.

3. The composite structure according to claim 1, wherein the finely divided titanium oxide particles have an average particle diameter of about $0.05\mu\text{m}$ to about $0.3\mu\text{m}$.

4. The composite structure according to claim 1, wherein the finely divided titanium oxide particles are adhered to the substrate through a binder.

5. The composite structure according to claim 1, wherein the binder is at least one compound selected from the group consisting of phosphor-containing compounds, zirconium-containing compounds and silicon-containing compounds.

6. The composite structure according to claim 1, wherein the substrate is made of at least one material selected from the group consisting of expanded obsidian, and foamed or porous perlite.

7. A method for deodorizing gas having offensive odor or treating wastewater, comprising the step of allowing gas having offensive odor or wastewater to be in contact with a composite structure having a photocatalytic function, which comprises a foamed or porous substrate having apparent specific gravity of 0.9 to 0.01 and finely divided titanium oxide particles adhered onto the surface of the foamed or porous substrate, whereby smelly or harmful substances contained in the gas or wastewater are decomposed.

8. The method for deodorizing air having offensive odor

or treating wastewater according to claim 7, wherein the air having offensive odor or wastewater is allowed to be in contact with the composite structure having a photocatalytic function, which floats on water.

9. The method for deodorizing gas having offensive odor or treating wastewater according to claim 7, wherein the finely divided titanium oxide particles have an average particle diameter of about $0.05\text{ }\mu\text{m}$ to about $0.3\text{ }\mu\text{m}$.

10. The method for deodorizing air having offensive odor or treating wastewater according to claim 7, wherein the finely divided titanium oxide particles are adhered to the substrate through a binder.

11. The method for deodorizing air having offensive odor or treating wastewater according to claim 7, wherein the binder is at least one compound selected from the group consisting of phosphor-containing compounds, zirconium-containing compounds and silicon-containing compounds.

12. The method for deodorizing air having offensive odor or treating wastewater according to claim 7, wherein the substrate is made of at least one material selected from the group consisting of expanded obsidian, and foamed or porous perlite.